

Applicants: Wayne A. Hendrickson et al.  
Serial No.: 09/609,027  
Filed: June 29, 2000  
Page 2

subject matter of these claims in a continuation or other application.

Please amend claims 21, 22, 26, and 27 as follows:

D1  
--21. (Amended) The method of claim 50, wherein  $F_1$  corresponds to a segment of amino acid residues from within N-terminal residues 1-10 of SCF (SEQ ID NO:1),  $F_2$  corresponds to a segment of amino acid residues from within residues 79-95 of SCF, and  $F_3$  corresponds to a segment of amino acid residues located within three amino acid residues of amino acid residue 127 of SCF, and where, in  $X_n$ ,  $X_m$ , and  $X_p$  respectively,  $n=0-5$ ,  $m=0-5$  and  $p=3-8$  amino acid residues.--

D2  
--22. (Amended) The method of claim 50, wherein  $F_1$ ,  $F_2$ , and  $F_3$  have been selected by bacterial phage display for optimal receptor binding.--

D3  
--26. (Amended) The method of claim 50, wherein the organic polymer is polyethyleneglycol (PEG) comprising the structure  $H[OCH_2CH_2]_nOH$ , wherein  $n$  is 10-20.--

--27. (Amended) The method of claim 50, wherein the capping moiety is a thiol-reactive group.

Please add new claims 48 to 51 as follows:

~~DEP  
SUP  
E~~  
--48. A method for designing a compound capable of binding to the Stem Cell Factor-binding site of a Kit comprising the steps of:  
a) determining the 3-D structure of a fragment of

SCF by computing atomic co-ordinates from X-ray diffraction data of a crystal of the fragment of SCF, wherein the fragment of SCF is capable of binding to the Kit;

- Sub E
- b) determining a Kit binding site on the fragment of SCF based on the 3-D structure; and
  - c) designing a compound capable of binding to the Stem Cell Factor-binding site of the Kit based on the 3-D structure shape complementarity or estimated interaction energy.

--49. The method of claim 48, wherein the fragment of SCF is a polypeptide comprising amino acids having the sequence set forth in SEQ ID NO:1.--

D4

--50. (New) The method of claim 48, wherein the designed compound capable of binding to a Kit comprises two ligand heads linked by a linker molecule, wherein the linker molecule is an organic polymer attached at each end to a separate capping moiety, each capping moiety attached in turn to a single ligand head via a cysteine residue, wherein the ligand head comprises the elements  $F_1-X_n-F_L(\text{Cys})-X_m-F_2-X_p-F_3$ , wherein  $F_1$ ,  $F_2$  and  $F_3$  are peptides each comprising amino acid sequences corresponding to consecutive amino acid residues of SCF (SEQ ID NO:1),  $X_n$  and  $X_p$  are peptides of  $n$  and  $p$  amino acid residues respectively,  $F_L$  is the cysteine residue and each element is linked to the next via a peptide bond.--

--51. The method of claim 27, wherein the thiol-reactive group is N-ethyl maleimide.--